Listing of Claims

1. (Previously Presented) An optical detector that electronically aligns to an optical fiber, the optical detector comprising:

a photo-detector device comprising an array of photo-sensors, which receives an optical signal output from an end of an optical fiber; and

a controller operatively connected to the photo-detector device, to generate a detection signal by processing photo-sensor signals output from one or more photo-sensors in the array that are actuated by said optical signal, while discounting photo-sensors in the array that are not actuated by said optical signal, to thereby electronically align the optical fiber to the photo-detector device.

2. (Previously Presented) An optical detector as claimed in claim 1, wherein the controller comprises:

DC extraction circuitry for extracting a DC component from the photo-sensor signal output from each photo-sensor in the array;

AC extraction circuitry for extracting an AC component from the photo-sensor signal output from ~~of~~ each photo-sensor in the array; and

multiplier circuitry coupled to the DC extraction circuitry and to the AC extraction circuitry for generating a separate multiplier output based on the AC component and the DC component of the photo-sensor signal output from ~~of~~ each photo-sensor in the array.

3. (Previously Presented) An optical detector as claimed in claim 2, wherein each multiplier output is based on the product of the AC component and the DC component of the photo-sensor signal output from ~~of~~ the corresponding photo-sensor.

4. (Previously Presented) An optical detector as claimed in claim 2, wherein the controller comprises summation circuitry coupled to the multiplier circuitry for combining the multiplier outputs to generate the received optical signal as the detection signal.

5. (Previously Presented) An optical detector as claimed in claim 4, wherein the DC extraction circuitry comprises a plurality of DC extraction circuits each corresponding to a different one of the photo-sensors and wherein the AC extraction circuitry comprises a plurality of AC extraction circuits each corresponding to a different one of the photo-sensors.

6. (Previously Presented) An optical detector as claimed in claim 5, wherein each DC extraction circuit comprises a DC current sensor coupled to the corresponding photo-sensor.

7. (Original) An optical detector as claimed in claim 5, wherein each AC extraction circuit comprises a transimpedance amplifier coupled to the corresponding photo-sensor.

8. (Previously Presented) An optical detector as claimed claim 2, wherein the multiplier circuitry comprises a plurality of multiplier circuits each corresponding to a different one of the photo-sensors.

9. (Previously Presented) An optical detector as claimed in claim 2, wherein the DC extraction circuitry comprises circuitry for extracting the DC component based on the AC signal strength of the photo-sensor signal output from ~~of~~ each photo-sensor in the array.

10. (Original) An optical detector as claimed in claim 2, wherein the multiplier circuitry comprises a switch.

11. (Original) An optical detector as claimed in claim 10, wherein the switch has a hysteresis.

12. (Previously Presented) An optical detector as claimed in claim 2, wherein each photo-sensor in the array comprises a photo-diode, the photo-diode having an anode and a cathode.

13. (Original) An optical detector as claimed in claim 2, wherein the array of photo-sensors comprises a two dimensional array of photo-sensors.

14. (Previously Presented) An optical communication system, comprising:

an optical fiber for transmitting an optical signal;

an optical detector disposed to face an end of the optical fiber, wherein the optical detector electronically aligns to the optical fiber, the optical detector comprising:

a photo-detector device comprising an array of photo-sensors, which receives an optical signal output from the end of the optical fiber; and

a controller operatively connected to the photo-detector device, to generate a detection signal by processing photo-sensor signals output from one or more photo-sensors in the array that are actuated by said optical signal, while discounting photo-sensors in the array that are not actuated by said optical signal, to thereby electronically align the optical fiber to the photo-detector device,

wherein the controller comprises DC extraction circuitry for extracting a DC component from the output of each photo-sensor in the array, AC extraction circuitry for extracting an AC component from the output of each photo-sensor in the array, and multiplier circuitry coupled to both the DC and AC extraction circuitry for generating a separate multiplier output based on the AC component and the DC component of the output of each photo-sensor in the array.

15. (Previously Presented) A method for processing an optical signal, comprising the steps of:

locating a photo-detector device having an array of photo-sensors in the path of an optical signal output from an end of an optical fiber; and

electronically aligning the photo-detector device to the end of the optical fiber, wherein electronically aligning comprises:

processing photo-sensor signals output from one or more photo-sensors in the array that are actuated by the optical signal;

generating a detection signal by processing said photo-sensor signals output; and

discounting photo-sensors in the array that are not actuated by said optical signal.

16. (Previously Presented) A method as claimed in claim 15, wherein generating comprises:

extracting a DC component from the output of each photo-sensor in the array;

extracting an AC component from the output of each photo-sensor in the array; and

generating a separate multiplier output based on the AC component and the DC component of the output of each photo-sensor in the array.

17. (Previously Presented) A method as claimed in claim 16, further comprising basing each multiplier output on the product of the AC component and the DC component of the output of the corresponding photo-sensor.

18. (Previously Presented) A method as claimed in claim 16, further comprising combining the multiplier outputs to generate the detection signal.

19. (Previously Presented) An optical detector as claimed in claim 12, wherein the AC extraction circuitry is connected to the anode of the photo-diode.

20. (Previously Presented) An optical detector as claimed in claim 12, wherein the AC extraction circuitry is connected to the cathode of the photo-diode.

21. (Previously Presented) An optical detector as claimed in claim 12, wherein the DC extraction circuitry is connected to the anode of the photo-diode.

22. (Previously Presented) An optical detector as claimed in claim 12, wherein the DC extraction circuitry is connected to the cathode of the photo-diode.